

**A Summary of Position of the Nunatsiavut Government to the
Commission of Inquiry Concerning the Muskrat Falls Project**

June 2018

The Nunatsiavut Government (NG) has been involved with the Lower Churchill project since the project was sent to a five-member panel of a Joint Review Panel under the Canadian Environmental Assessment Act. The NG intervened in this process, challenged the violation of Labrador Inuit rights in Provincial courts in *Nunatsiavut vs Newfoundland and Labrador* (2013), and worked with the three Indigenous groups, other affected municipalities, the Province of Newfoundland and Labrador, Canada and Nalcor to establish the Independent Expert Advisory Committee to the Muskrat Falls hydroelectric development. In addition to these direct interventions, the NG held dozens of meetings, workshops and consultations with government officials, community members and groups, and other organizations. Despite a concerted effort by the NG, no meaningful change has taken place to address the fundamental concerns of Labrador Inuit.

As a result of the lack of response from Nalcor, the Province of Newfoundland and Labrador and the Federal Government to these interventions and initiatives, including not responding to the recommendations of the Joint Review Panel Report recommendations, the NG was forced to partner with academic researchers and institutions to show through additional peer-reviewed science that Labrador Inuit's concerns were valid. Again, the results of the peer-review literature were dismissed along with the concerns of Labrador Inuit. Additionally, the NG started the Make Muskrat Right campaign, which identified the four asks of the Nunatsiavut Government:

1. Fully clear the future Muskrat Falls reservoir
2. Negotiate an Impact Management Agreement with the NG
3. Establish an Independent Expert Advisory Committee (IEAC)
4. Grant Inuit joint decision making authority over the downstream environmental monitoring and management of Muskrat Falls

Currently, only the establishment of the IEAC (#3) has been achieved. There are recommendations from the IEAC that could address ask #1 and ask #4, but the Province

of Newfoundland and Labrador has stalled on responding to the IEAC recommendations, and have yet to act on any of them despite being provided them in April 2018. There has been a reoccurring lack of response to the concerns of Labrador Inuit during the entire Muskrat Falls Hydroelectric development.

Background:

Since 1970, the Churchill River in central Labrador has been diverted from its natural channel through a hydroelectric power generating station at Churchill Falls and the headwaters have been controlled through the creation of the Smallwood Reservoir. The downstream effects of the Upper Churchill project on Lake Melville, the large saltwater estuary that drains the Churchill River into the Labrador Sea, are largely unknown; however, recent fish studies have documented elevated mercury levels and local residents have observed changes in wildlife, sea ice, water quality, and climate, among others, since the 1970s. The Lower Churchill project is now being developed on the Churchill River at Muskrat Falls, about 25 km upstream of Lake Melville. Flooding of its associated 59-km-long reservoir is scheduled to begin in 2019. This is a major project and the implications for Inuit are substantial. During the environmental assessment process the Nunatsiavut Government made approximately 30 submissions to the Panel charged with conducting the environmental review. The Panel report has since been released and both the federal and provincial governments have responded to the Panel report, but most of the recommendations were not acted on.

Mercury in the environment

Reservoirs are created by flooding land which boosts the natural process by which mercury is transformed by bacteria and accumulated in the food chain. Sudden flooding intensifies decomposition during the years immediately after the creation of a reservoir and mercury naturally present in the soil and vegetation becomes available to be transformed into methylmercury by the action of the bacteria in the water. Inuit are thus not faced with a new source of mercury but rather with a redistribution to the aquatic

environment of the mercury that is already present on the land. Methylmercury is highly toxic and it bioaccumulates in aquatic and marine food webs. Methylmercury concentrations increase into the top of the food web, to animals such as the ringed seal and then ultimately to Inuit. Nalcor has said that there would be no downstream increases in methylmercury. The Nunatsiavut Government and other experts (eg. Harvard University) disagree with Nalcor. The independent Review Panel also strongly disagreed with Nalcor. In particular, the Panel concluded that...

"...Nalcor's assertion that there would be no measurable effects on levels of mercury in Goose Bay and Lake Melville has not been substantiated."

"...the lack of information drawn from previous projects was likely compounded by Nalcor's decision to place the study boundary at the mouth of the river and therefore not carry out baseline sampling in Lake Melville."

"...evidence of a long-distance effect from the Churchill Falls project in estuarine species clearly indicate that mercury effects can cross from freshwater to saline environments, in spite of Nalcor's assertions to the contrary."

"...Nalcor did not carry out a full assessment of the fate of mercury in the downstream environment, including potential pathways that could lead to mercury bioaccumulation in seals and the potential for cumulative effects of the Project together with other sources of mercury to the environment."

The Panel also recognized the Aboriginal Rights and Title of Inuit downstream of the proposed Lower Churchill development, by identifying...

"... the importance to Upper Lake Melville and Rigolet residents of fishing and seal hunting in Goose Bay and Lake Melville for food, cultural and recreational purposes...(and the) potential for changes in country food consumption and for human health effects due to long-term low-level mercury exposure and consumption advisories."

The Panel also concluded that...

"... should consumption advisories be required in Goose Bay and Lake Melville, the Project would have significant adverse effects on the pursuit of traditional activities by Labrador Inuit, including the harvesting of country food."

Mercury and human health

It is known that extremely high levels of mercury can cause various human health impacts. However, a recently released study based out of Nunavik has demonstrated that Inuit children (at 11 years of age) exposed to higher levels of mercury pre-natally are three to five times more likely to be identified by teachers as having problems associated with Attention Deficit Hyperactivity Disorder. This study is the first to identify an association between prenatal methylmercury and ADHD symptomatology in childhood. Although the results are sub-clinical, it also demonstrates that there is no safe threshold for methylmercury. The reference to the study is:

Boucher, O., Jacobson, S.W., Plusquellec, P., Dewailly, E., Ayotte, P., Forget-Dubois, N., Jacobson, J.L., Muckle, G. (2012) **Prenatal methylmercury, postnatal lead exposure, and evidence of Attention Deficit Hyperactivity Disorder among Inuit children in Arctic Québec** *Environmental Health Perspectives* doi:10.1289/ehp.1204976

With respect to the proposed Lower Churchill Hydroelectric Development, a short-range 30 year pulse of methylmercury into the downstream environment due to the dam would cumulatively compound the already present long-range sources of mercury.

We know the following in relation to downstream mercury impacts related in relation to mercury:

- i) Nalcor has stated that there will no elevations of mercury as a result of the Lower Churchill development;
- ii) The independent review panel as well as independent experts strongly disagree (NG also disagrees);
- iii) Elevated levels of methylmercury were found downstream from the La Grande-2 dam in Quebec. Non-predatory fish have higher concentrations than those captured in the La Grande 2 reservoir. The predatory fish caught in the La Grande River have mercury concentrations similar to the levels found in the same species in the La Grande 2 reservoir;

- iv) Levels of mercury in fish from Lake Melville increased as a result of the creation of the Smallwood reservoir (Upper Churchill). The extent is unknown. The duration was approximately 30 years.

Although there are ways to mitigate the mobilization of methylmercury while creating a reservoir, there are no methods to eliminate its creation. As a result of this development, methylmercury is now a major risk to Inuit culture and health.

Community wellbeing (related to health)

The determination of the impacts of the proposed Lower Churchill development on community health is difficult. Typically, large scale developments tend to further marginalize already marginalized and disadvantaged people (this is well supported by reports and literature). Community well-being indicators put together by the Labrador Friendship Centre in Happy Valley – Goose Bay indicate that there are significant disparities between Indigenous and non-Indigenous populations for a number of indicators (eg. employment, income, education and housing). This demonstrates deep-rooted disadvantages and vulnerabilities of Indigenous Peoples in the Upper Lake Melville (ULM) region. Thus, any negative impact on ULM and Lake Melville communities and its social environment in general will be first and foremost experienced by these populations, specifically Labrador Inuit.

Summary

As a result of the above known information, the Nunatsiavut Government raised all of these concerns (and many other additional ones) through all the appropriate channels. The NG engaged in all possible forms, consultations and legal processes, but the concerns and issues of Labrador Inuit were not addressed. The consultation process of the Muskrat Falls project were obviously not appropriate as no steps were taken to address the concerns of Labrador Inuit. Any progress that has been made on the concerns of Labrador Inuit have been a direct result of the interventions of the Nunatsiavut

Government, Labrador Inuit and concerned citizens (including protests), and external scientific and research experts. Despite being presented with the concerns of Labrador Inuit, peer-reviewed literature and specific recommendations from the Nunatsiavut Government, Nalcor and the Province of Newfoundland and Labrador choose not to respond or address anything, unless they were forced to. This is unacceptable, puts Labrador Inuit at a significant disadvantage and clearly shows that the process for addressing the concerns and needs of Labrador Inuit have not been a priority during the Muskrat Falls project.